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PROCUREMENT SECTION
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Cotton Fiber and Processing Test Results

CROP of

1977



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 November 18, 1977

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1977

Discussion of Test Results

Short staple cottons tested through November 11 from the Southwestern area are slightly longer, more uniform, finer and stronger than last year, according to the Cotton Division, Agricultural Marketing Service, USDA. Both Shirley Analyzer nonlint content and picker and card waste are lower than a year ago. Yarns spun from these samples are considerably stronger this season. The average spinning potential yarn number is higher.

Average test results for all medium staple samples tested show slightly longer and coarser fibers than a year ago. Shirley Analyzer nonlint content is higher, but picker and card waste is lower. Yarns spun from these samples are weaker and have lower appearance grades. Yarn imperfections are higher.

Medium staple samples tested from the Southeast show fibers to have about the same fiber characteristics as a year ago at this time. Picker and card waste is lower than a year ago. Yarns spun from these samples show weaker skein strength and lower appearance grades. Yarn imperfections are fewer. The spinning potential yarn number is lower.

South Central medium staple samples tested are longer, coarser and weaker than a year ago at this time. Shirley Analyzer nonlint content is higher. Yarns spun from these samples show slightly weaker yarn skein strength with lower appearance grades. Yarn imperfections are higher.

Southwestern medium staple samples tested are slightly longer, more uniform and stronger at zero gage fiber strength tests. Picker and card waste is lower than a year ago. Yarns spun from these samples show lower yarn appearance grades. Yarn imperfections are fewer. Spinning potential yarn number is lower.

Medium staple samples tested from the West are slightly shorter, more uniform, coarser and stronger at zero gage strength tests. Picker and card waste is slightly lower than last season. Yarns spun from these samples are weaker than a year ago. Yarn imperfections are higher.

Long staple samples from the Southeast are shorter, less uniform, coarser and weaker than last season at this time. Both Shirley Analyzer nonlint content and Picker and card waste are higher. Yarns spun from these samples are weaker with lower appearance grades. Yarn imperfections are fewer. Spinning potential yarn number is lower.

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These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.^{1/} These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

1/ Summary of Cotton Fiber and Processing Test Results, Crop of 1976, USDA, AMS, Cotton Division, June 1977.

Table 1.---Cotton: Averages of fiber and processing tests from selected gin points in the United States
1/
through November 11, 1977

Staple group Area, and Crop year	Fiber test results										Processing test results				
	Lots tested	Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.			
		2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Skein str.	Appear- ance	Imperf- actions				
No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	Yarn No.				
									22s	Carded	Yarn				
Short Staple: Southwest 1976 1977	10	.97		44	4.4	84	20	3.3	7.3	85	110	14	36		
	41	.98		46	4.2	89	22	3.1	5.4	99	110	13	46		
Medium Staple: Southeast 1976 1977	11	1.08		45	4.8	86	24	3.1	6.5	109	101	23	56		
	21	1.08		45	4.8	87	23	3.1	6.0	97	94	20	51		
South Central 1976 1977	54	1.08		45	4.3	88	24	2.7	6.1	109	100	15	55		
	100	1.11		45	4.6	86	23	3.5	6.0	105	96	21	57		
Southwest 1976 1977	25	1.07		45	4.2	81	22	3.2	6.2	104	98	20	58		
	42	1.08		46	4.2	86	22	3.2	5.7	103	91	18	54		
West 1976 1977	14	1.13		45	4.2	89	26	2.5	5.8	123	88	21	68		
	8	1.12		46	4.4	91	26	2.4	5.5	117	89	24	67		
U.S. Average 1976 1977	104	1.09		45	4.3	86	23	2.8	6.1	110	98	18	57		
	171	1.10		45	4.5	86	23	3.3	5.9	104	94	21	56		
Significant dif- ference 2/		0.02		2	0.2	2	1	0.5	0.5	4(22s)	5	2	3		

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through November 11, 1977 1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results											
		Length		Mike	Strength		SA Non- lint	P&C Waste	Comber Waste	Yarn Quality				SPY					
		Span	Unif		Zero gage	1/8" gage				Strength carded	Appearance combed	Imprfctns card	comb						
				In.			Pct.	Rdg.	Mpsi					G/tx	Pct.	Lbs.	Idx	Idx	No.
		No.																	
Long Staple: Southeast 1976 1977	4	1.15	46	4.4	88	26	2.8	6.3	15.8	118	140	108	122	21	8	68			
	6	1.13	45	4.8	86	23	3.2	6.6	*	102	*	103	*	15	*	58			
	1	1.11	41	3.7	91	27	3.3	6.6	22.0	113	141	100	100	17	9	55			
	2	1.14	44	4.4	90	24	3.8	6.8	*	105	*	95	*	26	*	63			
South Central 1976 1977																			
Significant Difference 2/		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	5	5	2	2	2	3			

1/ Based on a limited number of samples of modal quality
2/ Minimum differences considered to be significant for comparisons in this table.

* Combed data not available.

Based on a limited number of samples of modal quality
Minimum differences considered to be significant for
Combed data not available.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1977

Production Area, Classification				Fiber Test Results						Processing Test Results - Carded Yarns												
Sample Number		Grade	Style	Digital Fibrograph		Mike	Fiber Strength		Elon-gatin 1/8"	S.A. Non-lint	Color		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent-ial
				2.5% span	Unif		Zero	1/8" Gage			Gra	Yel		8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx	
No	Name & Code	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No
SOUTHWEST AREA																						
NORTHWEST TEXAS																						
1	AMHERST MID	31	31	0.92	49	4.8	84	20	PAYMASTER 18 6.5	1.9	0	3	4.4	264	87	7.2	5.8	120	110	35	13	40
ANSON																						
1	MID	31	31	0.94	45	3.5	86	21	LANKART 611 7.1	3.2	1	4	5.2	290	92	7.5	6.4	110	100	37	20	44
BROWNFIELD																						
1	MID	31	31	1.00	45	3.7	88	22	GSA71 6.2	3.3	1	4	4.1	299	103	7.5	6.8	120	110	25	11	56
LAMESA																						
2	MID LT SP	32	30	0.93	46	4.1	88	20	BLIGHTMASTER A5 5.9	4.0	2	5	6.2	266	86	7.5	5.8	120	110	23	13	41
LCRENZO																						
1	MID	31	32	1.06	44	3.7	84	19	PAYMASTER 303 6.4	2.8	0	3	4.8	308	101	8.3	6.5	120	100	27	15	52
NEWCASTLE																						
1	MID	31	31	0.96	46	4.3	90	21	LANKART 57 6.5	2.5	1	4	5.7	292	98	7.4	5.8	130	110	22	11	45
PACUCAH																						
1	MID	31	31	0.96	46	4.9	88	22	LANKART 611 6.4	2.5	1	4	4.8	295	97	7.6	6.3	130	120	13	8	47
PETERSBURG																						
2	MID	31	32	0.98	47	4.7	86	21	PAYMASTER 303 6.2	2.1	1	3	5.0	289	97	7.4	6.2	130	120	16	10	46
RALLS																						
1	MID	31	32	1.02	46	3.4	89	23	PAYMASTER 303 6.5	3.2	0	3	5.5	301	105	8.2	6.7	120	110	22	13	57
RULE																						
2	MID	31	32	1.06	47	4.4	88	22	LANKART LX571 6.3	2.6	1	4	4.6	302	103	7.8	6.8	120	100	20	14	59
VERNON																						
1	MID LT SP	32	30	0.96	47	4.7	87	21	LANKART 57 6.2	2.7	1	4	4.7	287	96	7.3	6.0	120	110	19	11	47
VERNON																						
1	MID	31	32	1.00	45	3.8	102	23	LOCKETT 77 7.7	2.6	0	3	4.2	327	116	7.4	6.3	130	110	17	12	67

1/ Cotton stuck to processing rolls

Table 3--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Stple	Name & Code	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial	
				2.5% span	Unif.		Zero Gage	Mpsi			G/tex	Pct		Gra	Yel	22s or 27 tx	Lbs	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx		50s or 12 tx
32s				In	Pct	Rdg			Pct		No	No	Pct		Lbs	Pct	Pct	No	No	No	No	No	
SOUTHEAST AREA																							
ALABAMA																							
FAMILTON																							
1	MID LT SP	32	33	1.08	43	4.6	79		DELTA PINE 61	1.8	3	4	4.5	90 PERCENT	92	29	5.9	4.3	90	70	13	12	51
2	MID LT SP	32	33	1.07	43	4.7	82			1.6	3	4	6.0		90	27	5.8	3.7	90	60	14	13	49
MERIDIANVILLE																							
2	LM SP	53	33	1.07	44	4.7	93		STONEVILLE 603	6.2	7	4	8.9	100 PERCENT	79	22 1/2	4.6	3.3	90	60	22	23	25
WILSONVILLE																							
2	MID LT SP	32	34	1.10	44	4.2	84		DELTA PINE 16	2.2	2	3	5.3	90 PERCENT	97	31	6.5	4.5	90	70	16	14	55
GEORGIA																							
ALLEN TOWN																							
2	SLM LT SP	42	34	1.09	46	5.1	88		COKER 201	3.8	2	4	7.2	100 PERCENT	92	28	5.2	3.7	80	60	21	16	46
NORTH CAROLINA																							
RED SPRINGS																							
1	SLM	41	35	1.12	46	4.8	90		MCNAIR 612	2.6	2	3	5.1	80 PERCENT	107	36	5.4	4.3	90	70	18	13	59
SOUTH CAROLINA																							
MAYESVILLE																							
2	MID	31	34	1.08	44	4.8	87		COKER 201	3.3	2	3	5.8	100 PERCENT	90	29	5.4	3.7	80	60	28	23	44
SOUTH CENTRAL AREA																							
ARKANSAS																							
ALTHEIMER																							
3	SLM	41	36	1.15	45	4.1	87		DELTA PINE 16	2.3	1	2	5.1	100 PERCENT	112	38	6.4	4.7	80	70	19	15	68
BISCOE																							
2	SLM LT SP	42	35	1.10	46	4.8	84		STONEVILLE 213	4.0	4	4	6.1	99 PERCENT	101	31	5.9	4.4	100	70	22	16	61
DUMAS																							
3	SLM	41	35	1.10	45	4.6	85		STONEVILLE 213	3.2	1	2	5.2	100 PERCENT	104	35	5.9	4.4	90	70	20	13	61
EUCORA																							
3	SLM	41	35	1.10	48	4.7	88		DELTA PINE 61	2.9	1	3	5.6	100 PERCENT	108	36	6.5	4.8	110	80	12	9	57
HUGHES																							
3	SLM	41	35	1.10	46	4.8	87		STONEVILLE 213	2.0	2	3	4.8	100 PERCENT	101	33	6.1	4.5	80	60	23	19	55
KEISER																							
3	LM	51	34	1.10	44	3.9	81		NEW REX	3.2	3	2	5.9	100 PERCENT	89	28	5.5	3.8	110	80	13	12	51

1/ End breakage too high to spin 50s yarn. 44s Yarn spun and strength adjusted to equivalent of 50s.

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977--(Continued)

Production Area, Classification				Fiber Test Results										Processing Test Results - Carded Yarns									
Sample Number		Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial	
No	Grade			2.5% span	Unif.		Zero Gage	1/8" Gage			Raw Gra	Yel		22s or 27 tx	50s or 12 tx	Pct	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx		
SOUTHEAST AREA--(Continued)																							
LOUISIANA																							
LAKE PROVIDENCE		41	36	1.15	47	4.7	85	24	6.7	3.1	1	2	5.6	100 PERCENT	114	37	6.9	5.0	100	80	19	11	70
LAKE PROVIDENCE		50	35	1.13	44	4.9	86	22	5.0	3.5	2	2	6.3	100 PERCENT	95	28	5.1	3.6	90	60	25	17	49
MCNROE		41	35	1.13	46	4.5	79	23	6.8	3.0	1	3	4.7	100 PERCENT	108	35	6.4	4.9	90	60	24	20	66
SHREVEPORT		41	35	1.10	46	5.0	81	22	6.4	3.1	2	3	6.1	100 PERCENT	98	30	6.0	4.3	100	80	11	11	53
SICILY ISLAND																							
2 SLM LT SP		42	34	1.07	46	5.0	84	20	5.7	3.7	3	4	7.0	100 PERCENT	86	25	5.7	3.7	90	80	20	14	44
MISSISSIPPI																							
BELZONI		51	35	1.14	44	4.2	82	22	6.8	4.2	2	2	5.8	100 PERCENT	111	38	6.5	5.1	100	70	16	13	62
CLARKSDALE		51	35	1.11	46	4.6	84	23	5.9	4.6	3	2	5.6	100 PERCENT	99	31	5.7	4.1	80	70	23	17	55
COMC		51	34	1.12	46	4.7	83	23	6.0	4.1	2	2	6.3	98 PERCENT	100	32	6.0	4.3	90	70	17	15	55
GREENVILLE		41	36	1.13	44	4.2	87	23	6.4	2.6	1	2	6.0	100 PERCENT	112	39	6.4	4.9	90	70	21	16	67
GREENVILLE		51	36	1.13	46	4.7	91	24	5.8	4.8	2	2	7.2	100 PERCENT	111	36	6.0	4.4	90	70	22	20	59
HOLLANDALE		51	36	1.18	46	4.3	83	24	6.5	5.9	2	2	6.9	100 PERCENT	113	38	6.6	5.0	90	70	24	18	73
MORGAN CITY		51	35	1.06	45	4.2	87	22	5.8	4.7	4	2	6.4	100 PERCENT	90	29	5.9	4.7	80	60	24	19	44
SCOTT		51	35	1.14	44	4.0	90	22	5.5	4.1	2	2	6.0	100 PERCENT	109	36	6.0	4.4	90	70	25	16	67
TRIBETT		42	35	1.10	45	4.5	88	21	5.7	3.1	3	3	6.2	100 PERCENT	101	32	6.0	4.2	100	80	15	12	53

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977---(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns										
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potential	
				2.5% span	Unif.		Zero Gage	1/8" Gage		Pct	Pct	Gra	Yel		Lbs	Lbs	22s or 27 tx	50s or 12 tx	Pct	Pct	22s or 27 tx	50s or 12 tx		No
SOUTHEAST AREA----(Continued)																								
MISSISSIPPI---(Continued)																								
TRIBBETT																								
3 LM	51	35	1.14	45	4.2	94	20	4.6	2.6	4	2	5.8			100 PERCENT	104	33	5.1	3.8	90	70	17	13	58
WATER VALLEY																								
3 SLM	41	34	1.08	43	4.3	84	22	7.0	2.9	2	3	5.4			75 PERCENT	92	29	5.4	3.8	80	70	22	17	48
MISSOURI																								
HAYTI																								
2 SLM	41	35	1.12	47	5.1	84	23	6.5	1.9	2	2	5.4			98 PERCENT	104	31	6.3	4.1	100	80	15	11	57
PARMA																								
2 LM LT SP	52	34	1.06	46	5.2	85	21	6.1	4.4	4	3	9.1			100 PERCENT	84	26	5.3	4.0	90	80	20	15	38
SENATH																								
3 LM	51	34	1.07	44	4.0	83	21	5.9	4.0	3	3	6.9			100 PERCENT	101	34	5.9	4.5	80	60	27	24	59
SENATH																								
3 SLM LT SP	42	34	1.10	45	4.4	78	22	7.2	3.7	3	3	5.4			76 PERCENT	101	33	6.2	4.5	90	60	23	19	59
TENNESSEE																								
FRADEN																								
3 SLM LT SP	42	34	1.10	46	4.6	83	23	6.5	3.9	3	3	5.7			70 PERCENT	94	29	6.2	4.0	100	70	15	11	50
RCSEMARK																								
2 SLM	41	34	1.06	46	5.0	90	21	5.4	2.1	3	3	6.2			70 PERCENT	94	30	5.9	4.0	90	60	18	14	49
3 SLM LT SP	42	33	1.02	43	3.7	88	21	5.6	3.5	4	4	6.8				85	28	5.4	3.4	80	60	23	19	40
SOUTHWEST AREA																								
CENTRAL TEXAS																								
GRANDVIEW																								
3 MID	31	31	0.98	43	3.9	92	22	5.3	2.9	1	4	7.2			90 PERCENT	76	20	4.8	3.5	80	60	23	20	25
NORTHWEST TEXAS																								
ACKERLY																								
2 MID LT SP	32	31	0.98	46	4.3	92	22	5.9	3.3	1	4	6.5			70 PERCENT	91	29	5.2	3.9	90	70	23	14	42

1/ End breakage too high to spin 50s yarn. 36s yarn spun and strength adjusted to equivalent of 50s.

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977---(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Name & Code	Style	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial	
				2.5% span	Unif.		Zero Gage	1/8" Gage			Pct	Pct		Gra	Yel	Pct	Pct	Lbs	Lbs	Pct	Pct		22s or 27 tx
SOUTHWEST AREA---(Continued)																							
NORTHWEST TEXAS---(Continued)																							
ELDCRADO																							
1 MID	31	31	0.96	44	3.6	89	20	5.9	1.6	1	3	5.9	75 PERCENT	81	22 1/2	5.3	3.8	70	60	27	26	25	
2 MID	31	31	0.91	43	3.6	86	20	6.3	2.6	1	4	5.7		72	21 1/2	5.1	3.6	80	70	19	20	25	
LUBBOCK																							
2 MID	31	36	1.16	45	4.3	86	23	5.9	4.1	1	3	6.8	100 PERCENT	105	35	6.0	4.3	70	60	35	26	54	
LUBBOCK																							
2 MID	31	36	1.10	45	4.2	84	23	6.6	2.9	1	4	5.7	100 PERCENT	107	37	6.6	4.9	80	60	24	22	59	
WEST AREA																							
ARIZONA																							
BUCKEYE																							
1 SLM	41	35	1.11	44	4.7	90	25	6.2	3.0	2	3	6.2	100 PERCENT	101	33	5.8	4.3	100	70	16	12	52	
MARICOPA																							
1 SLM	41	35	1.12	43	4.5	91	24	6.4	2.5	2	3	5.1	100 PERCENT	106	35	6.0	4.4	90	70	23	15	57	
CALIFORNIA																							
ARVIN																							
2 SLM PLUS	40	36	1.13	47	4.2	96	27	5.7	2.4	0	3	5.9 1/2	99 PERCENT	127	47	6.3	5.0	80	70	23	20	76	

1/ End breakage too high to spin 50s yarn. 36s yarn spun and strength adjusted to equivalent of 50s.

2/ Cotton stuck to processing rolls.

* 100% selected for tests, less than 100% in area.

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1977

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
Grade		Stple	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potential		
No	Name & Code		2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx			
SOUTHEAST AREA																							
ALABAMA																							
JACKSONVILLE																							
2 SLM SP	43	33	1.10	43	4.5	87	23	COKER 310	5.8	3.8	4	4	6.3	89	27	4.8	3.6	90	60	16	14	51	
NORTH CAROLINA																							
CUNN																							
2 MID	31	35	1.12	47	4.9	90	24	COKER 310	5.5	2.0	2	3	5.4	105	35	5.2	3.9	110	90	13	10	61	
SOUTH CAROLINA																							
PARTSVILLE																							
2 SLM	41	36	1.20	45	4.7	86	24	COKER 310	5.4	3.8	2	3	6.9	106	37	5.3	4.3	90	70	19	16	66	
SOUTH CENTRAL AREA																							
MISSISSIPPI																							
LAKECCRMCRANT																							
2 LLM	51	36	1.14	44	4.2	92	24	COKER 310	5.0	3.8	3	2	6.9	101	34	5.3	3.9	90	60	25	21	62	

1/ Reduced from grade 41 because of grass